

PREREQUISITES

- Install Virtual Machine
- Install one of Linux distribution i.e. Ubuntu, Fedora, Kali, k8, CentOS

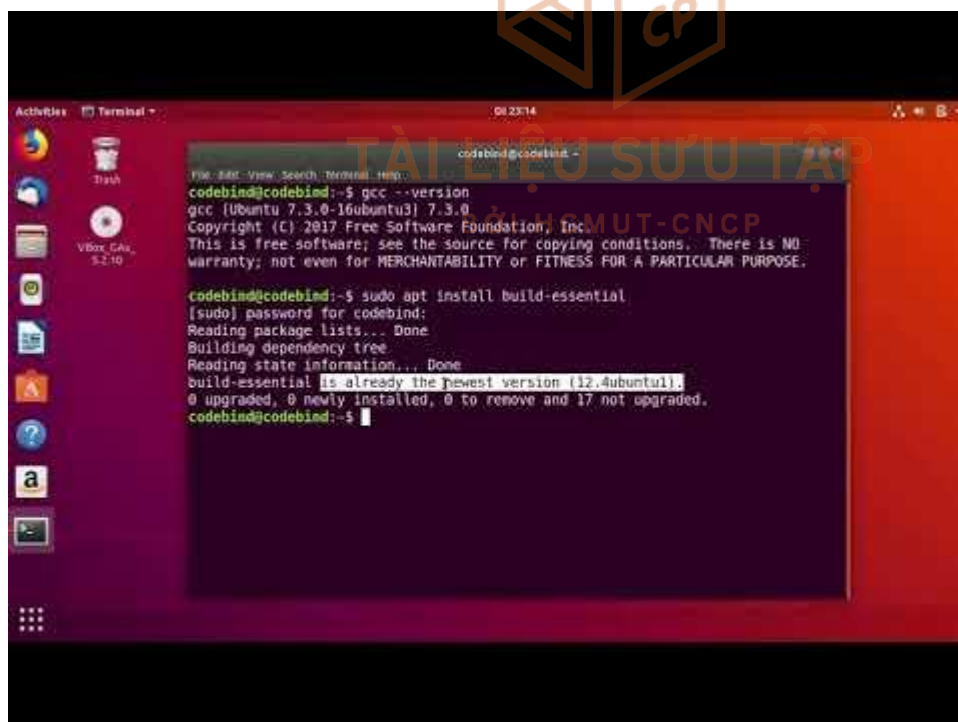
- Setup VM: <https://youtu.be/wX75Z-4MEoM>
- Virtual Box: <https://www.virtualbox.org/>
- Ubuntu: <https://ubuntu.com/download/desktop>

FOR UBUNTU, THE REQUIRED SIZE OF VIRTUAL HARDDISK AT LEAST 15GB. THE DEFAULT OF VIRTUALBOX/VMWARE PLAYER AT 10GB MAY CAUSE MANY PROBLEM OF LACKING DISK SPACE LATER

- Linux command:

INTRODUCTION TO LINUX AND BASIC LINUX COMMANDS FOR BEGINNERS

- Compile C program in Ubuntu:



The screenshot shows a terminal window on a Linux desktop. The user is at the prompt `codebind@codebind:~$`. They run `gcc --version`, which outputs: `gcc (Ubuntu 7.3.0-16ubuntu3) 7.3.0`. Then they run `sudo apt install build-essential`, which outputs: `[sudo] password for codebind: Reading package lists... Done Building dependency tree Reading state information... Done build-essential is already the newest version (12.4ubuntu1). 0 upgraded, 0 newly installed, 0 to remove and 17 not upgraded.`. The terminal window has a dark background with a red border. The desktop background is dark red with a logo in the center. The logo is a stylized 'C' and 'P' inside a hexagon, with the text 'TÀI LIỆU SƯU TẬP' and 'BACH KHOA CNCP' around it.

Practice:

- Practice with command line text editor VIM or NANO

- Write a program using C language
- Compile a program **automatically** using Makefile template.

TUTORIAL AND REFERENCES

- How to retrieve the information of running process? (E-learning document)
- Video tutorial for vim: <https://youtu.be/wlR5gYd6um0>

- C Programming

https://www.youtube.com/playlist?list=PL_c9BZzLwBRKKqOc9TJz1pP0ASrxLMtp2

C Programming Tutorial 1 - Intro to C

C Programming Tutorial 6 - Intro to UNIX/Linux - Part 1

C Programming Tutorial 7 - Intro to UNIX/Linux - Part 2

Linux command line: <https://youtu.be/cBokz0LTizk>

GNU make: <https://www.gnu.org/software/make/manual/make.html>

C tutorial: <https://www.tutorialspoint.com/cprogramming/index.htm>

C datatype: https://www.tutorialspoint.com/cprogramming/c_data_types.htm

For Ubuntu: to install basic library to compile and develop program:

```
sudo apt-get install build-essential
```

HOW TO COMPILE AND RUN C PROGRAM USING GCC ON UBUNTU (LINUX)

HOW TO MAKE A MAKEFILE (C++ / C) (MAKEFILE TUTORIAL)

WHAT TO DO